In the Claims

1-17 (canceled)

18 (currently amended). An apparatus for imaging an object, comprising a probe via which an assay component may be delivered; means for vibrating the probe substantially normal to the surface of the object; a sensor to detect ion current; ~~and~~ means for ~~controlling the position of the probe relative to~~ monitoring modulation of the ion current resulting from the vibration of the probe while close to the surface of the object; and means to control the distance of the probe from the surface of the object in response to the modulation of the ion current.

19 (previously presented). The apparatus according to claim 18, wherein the probe is a micropipette.

20 (previously presented). The apparatus according to claim 18, wherein the assay component is light.

21 (previously presented). The apparatus according to claim 19, wherein the assay component is light.

22 (currently amended). The apparatus according to claim 20, wherein the probe comprises a ~~fibre~~ fiber optic.

23 (previously presented). The apparatus according to claim 20, which additionally comprises a laser light source.

24 (previously presented). The apparatus according to claim 22, which additionally comprises a laser light source.

25 (previously presented). The apparatus according to claim 20, wherein the probe contains a light-activatable dye at its tip.

26 (previously presented). The apparatus according to claim 20, wherein the outer surface of the probe is coated to prevent leakage of light.

27 (previously presented). The apparatus according to claim 20, wherein the outer surface of the probe is coated with a metal layer to prevent leakage of light.

28 (previously presented). The apparatus according to claim 18, wherein the probe contains, as the assay component, a substance that, at the surface of a live cell, produces a detectable change.

29 (previously presented). The apparatus according to claim 19, wherein the probe contains, as the assay component, a substance that, at the surface of a live cell, produces a detectable change.

30 (previously presented). The apparatus according to claim 28, wherein said substance generates fluorescence, bioluminescence or chemiluminescence.

31 (previously presented). The apparatus according to claim 29, wherein said substance generates fluorescence, bioluminescence or chemiluminescence.

32 (previously presented). The apparatus according to claim 18, wherein the probe contains, as the assay component, a substance that, on delivery to a live cell, produces a detectable change inside the cell.

33 (previously presented). The apparatus according to claim 19, wherein the probe contains, as the assay component, a substance that, on delivery to a live cell, produces a detectable change inside the cell.

34 (canceled).

35 (currently amended). A method for imaging an object in a liquid environment, by scanning ~~ionconductance~~ ion conductance microscopy, ~~using a probe whose distance from the object is maintained in response to the ion current in the liquid~~ which comprises vibrating a probe substantially normal to the surface of the object, detecting ion current, monitoring modulation of the ion current resulting from the vibration of the probe while close to the surface of the object, controlling the distance of the probe from the surface of the object in response to the modulation of the ion current, wherein the probe includes means for delivering an assay component to the object.

36 (previously presented). The method according to claim 35, wherein the probe is a micropipette.

37 (currently amended). The method according to claim 35, wherein the probe comprises a ~~fibre~~ fiber optic.

38 (previously presented). The method according to claim 35, wherein the probe contains a light-activatable dye at its tip.

39 (previously presented). The method according to claim 35, wherein the outer surface of the probe is coated with a metal layer to prevent leakage of light.

40 (previously presented). The method according to claim 35, wherein the probe contains, as the assay component, a substance that, at the surface of a live cell, produces a detectable change.

41 (previously presented). The method according to claim 36, wherein the probe contains, as the assay component, a substance that, at the surface of a live cell, produces a detectable change.

42 (previously presented). The method according to claim 41, wherein said substance generates fluorescence, bioluminescence or chemiluminescence.

43 (previously presented). The method according to claim 35, wherein the probe contains, as the assay component, a substance that, on delivery to a live cell, produces a detectable change inside the cell.

44 (previously presented). The method according to claim 36, wherein the probe contains, as the assay component, a substance that, on delivery to a live cell, produces a detectable change inside the cell.

45 (previously presented). The method according to claim 35, wherein the assay component is light.

46 (previously presented). The method according to claim 45, which additionally comprises a laser light source.

47 (previously presented). The method according to claim 35, wherein the probe contains, as the assay component, a substance that, at the surface of a live cell, produces a detectable change.

48 (previously presented). The method according to claim 47, wherein said substance generates fluorescence, bioluminescence or chemiluminescence.

49 (previously presented). The method according to claim 35, wherein the probe contains, as the assay component, a substance that, on delivery to a live cell, produces a detectable change inside the cell.

50 (previously presented). The method according to claim 35, which comprises generating light and wherein the said distance is less than the wavelength of the light.

51 (canceled).

52 (previously presented). The method according to claim 35, wherein the object is a live cell.